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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/698,696	10/27/2000	Christopher J. Curtin	CT-A131 US	6128

43734 7590 12/07/2005

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EXAMINER
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QUARTERMAN, KEVIN J

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 12/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No. 09/698,696	Applicant(s) CURTIN ET AL.	
	Examiner Kevin Quarterman	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3, 6, 7, 10-17, 22, 26-32, 35-40, 84, 97-99, 114, 266, 281, 289, 310 and 319 is/are allowed.
- 6) ☒ Claim(s) 41, 57, 58 and 365-368 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**Continuation of Disposition of Claims:** Claims pending in the application are 1-3, 6, 7, 10-17, 22, 26-32, 35-41, 57, 58, 84, 97-99, 114, 266, 281, 289, 310, 319 and 365-368.

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment and remarks received 03 October 2005 have been entered.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 41, 57, and 58 are rejected under 35 U.S.C. 102(b) as being anticipated by Clerc (US 5,786,660).
4. Regarding independent claim 41, Fig. 3 of Clerc shows a structure comprising a plate (10); an electron-emissive element (2) overlying the plate; an electron focusing system (17), the electron-focusing system comprising an electrically non-insulating focus coating (15) overlying the plate; and a getter region (21) overlying at least part of the focus coating, a composite opening (14) extending through the getter region and the focus coating generally laterally where the electron-emissive element overlies the plate, the composite opening comprising an opening through the getter region and an opening through the focus coating.
5. Regarding claim 57, Clerc discloses the getter region consisting largely of only a single atomic element (col. 5, ln. 25-26).

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6. Regarding claim 58, Clerc discloses the single atomic element being one of aluminum, titanium, vanadium, iron, zirconium, niobium, molybdenum, barium, tantalum, tungsten, and thorium (col. 5, ln. 25-26).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 365-368 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clerc (US, 5,786,660).

10. Regarding independent claim 365, and also claims 366 and 367, Figure 3 of Clerc shows a structure comprising a plate (10); an electron-emissive element (2) overlying the plate; a control electrode (15) overlying the plate; a getter region (21)

extending over the control electrode above the plate; and an electrically insulating layer (13) situated between the getter region and the control electrode so as to separate the getter region and the control electrode, a composite opening (14) extending through the getter region and the control electrode generally laterally where the electron-emissive element overlies the plate, the composite opening comprising an opening through the getter region and an opening through the control electrode.

11. Clerc teaches the limitations of independent claim 365 discussed earlier but fails to exemplify the getter region being thicker than the insulating layer. However, Clerc discloses that the thickness of the insulating layer depends on the operating voltage of the screen (col. 6, ln. 6-9). Clerc also discloses that a very large-size getter enables the elimination of the pumping tube (col. 5, ln. 29-30).

12. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the structure of Clerc with a getter region being thicker than the insulating layer for absorbing contaminant gases, since where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation (MPEP § 2144.05).

13. Regarding claim 368, Clerc discloses the getter region comprising at least one of aluminum, titanium, vanadium, iron, zirconium, niobium, molybdenum, barium, tantalum, tungsten, and thorium (col. 5, ln. 25-26).

***Allowable Subject Matter***

14. Claims 1-3, 6-7, 10-17, 22, 26-32, 35-40, 84, 97-99, 114, 266, 281, 289, 310, and 319 are allowed.

15. The following is a statement of reasons for the indication of allowable subject matter: The above referenced claims were previously allowed in the previous office action. The Examiner's reasons for the indication of allowable subject matter are repeated in this office action.

16. Regarding independent claim 1, the prior art of record neither shows or suggests a structure comprising, in addition to other limitations of the claim, a getter region overlying at least part of a light-blocking region and extending no more than partially laterally across a light-emissive region, and a perforated electrically non-insulating layer overlying at least part of the getter region or/and at least part of the light-emissive region. Due to their dependency upon independent claim 1, claims 2-3, 6-7, 10-17, 22, and 26-30 are also allowable.

17. Regarding independent claim 31, the prior art of record neither shows or suggests a structure comprising, in addition to other limitations of the claim, an electrically non-insulating layer overlying at least part of a light-blocking region, and a getter region overlying at least part of the non-insulating layer above at least part of the light-blocking region, an opening extending largely through the getter region generally laterally where the light-emissive region overlies a plate. Due to their dependency upon independent claim 31, claims 32, 35-40, and 266 are also allowable.

18. Regarding independent claim 84, the prior art of record neither shows or suggests a structure comprising, in addition to other limitations of the claim, a group of laterally separated control electrodes overlying a plate, electron-emissive elements being exposed through respective openings in the control electrodes, and a getter

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region overlying the plate at least partially between a consecutive pair of the control electrodes. Due to their dependency upon independent claim 84, claims 97 and 98 are also allowable.

19. Regarding independent claim 99, the prior art of record neither shows or suggests a structure comprising, in addition to other limitations of the claim, a group of laterally separated control electrodes overlying a plate; a raised section overlying the plate and extending over at least part of each control electrode; and a getter region overlying the plate and exposed through or/and situated in a primary opening in the raised section.

20. Regarding independent claim 114, the prior art of record neither shows or suggests a structure comprising, in addition to other limitations of the claim, a group of electron-emissive elements overlying a plate and situated mostly in respective laterally separated openings in a dielectric layer and a getter region overlying at least part of the dielectric layer and contacting, or connected by directly underlying electrically non-insulating material to, the dielectric layer, at least part of the getter region situated above a location between a pair of the openings in the dielectric layer. Due to its dependency upon independent claim 114, claim 281 is also allowable.

21. Regarding independent claim 289, the prior art of record neither shows or suggests a structure comprising, in addition to other limitations of the claim, a multiplicity of openings extending through a light-blocking region; a like multiplicity of laterally separated light-emissive regions overlying a plate; a getter region overlying at least part of the light-blocking region and extending no more than partially laterally



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across each light-emissive region; and a perforated electrically non-insulating layer overlying at least part of the getter region or/and at least part of each light-emissive region.

22. Regarding independent claim 310, the prior art of record neither shows or suggests a structure comprising, in addition to other limitations of the claim, a multiplicity of openings extending largely through a light-blocking region; a like multiplicity of laterally separated light-emissive regions overlying a plate, each light-emissive region situated at least partially in a different corresponding one of the openings in the light-blocking region; an electrically non-insulating layer overlying at least part of the light-blocking region; and a getter region overlying at least part of the non-insulating layer above the light-blocking region, a like multiplicity of openings extending largely through the getter region respectively generally laterally where the light-emissive regions overlie the plate.

23. Regarding independent claim 319, the prior art of record neither shows or suggests a structure comprising, in addition to other limitations of the claim, a multiplicity of laterally separated electron-emissive regions overlying a plate; a support region overlying the plate; and a getter region overlying at least part of the support region, a multiplicity of composite openings extending through the getter and support regions generally laterally where the electron-emissive regions overlie the plate, each composite opening comprising an opening through the getter region and an opening through the support region.

***Response to Arguments***

24. Applicant's arguments with respect to claims 365-368 have been considered but are moot in view of the new ground(s) of rejection.

25. In response to applicant's argument that Clerc's rows of gate lines do not focus, or assist in focusing, electrons emitted by the electron-emissive elements, the Examiner notes that Clerc discloses that electrons are transferred from the electron-emissive elements toward the phosphor elements of the anode by the electric field generated between the cathode and the gate (col. 1, ln. 37-40). Thus, the Examiner holds that Clerc teaches the limitations of independent claim 41, as discussed earlier.

***Conclusion***

26. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

27. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

**Contact Information**

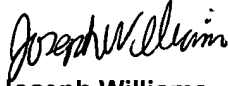
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Quarterman  
Examiner  
Art Unit 2879

kq   
29 November 2005

  
Joseph Williams  
Primary Examiner  
Art Unit 2879